

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. An electrophysiology catheter having a proximal end and a distal end, first generally hollow electrode member at the distal end, the first electrode having a generally cylindrical sidewall and a dome shaped distal end, and a second electrode spaces proximally from the first electrode, and a magnet member at least partially within the hollow electrode member.

2. The electrophysiology catheter according the claim 1 wherein the magnet member is a permanent magnet.

3. The electrophysiology catheter according to claim 1 wherein the magnet member is a permeable magnet material.

4. The electrophysiology catheter according to claim 1 wherein the magnet is sufficient size and strength to align the distal end of the electrophysiology catheter inside the body of a patient with an externally applied magnetic field.

5. The electrophysiology catheter according to claim 4 wherein the magnet member is a permanent magnet.

6. The electrophysiology catheter according to claim 4 wherein the magnet member is a permeable magnet material.

7. The electrophysiology catheter according to claim 1 wherein the magnet is sufficient size and strength to align the distal end of the electrophysiology catheter inside the body of a patient with an externally applied magnetic field of at least 0.1T.

8. The electrophysiology catheter according to claim 7 wherein the magnet member is a permanent magnet.

9. The electrophysiology catheter according to claim 7 wherein the magnet member is a permeable magnet material.

10. The electrophysiology catheter according to claim 1 wherein the magnet member is substantially entirely within the hollow electrode member.

11. The electrophysiology catheter according to claim 1 wherein the first electrode has a plurality of openings in its distal end, and wherein the magnet has a passage therethrough for conducting fluid from the catheter to the distal end of the first electrode wherein it can exit the first electrode through the plurality of openings in the distal end.

12. The electrophysiology catheter according to claim 11 wherein the magnet member is a permanent magnet.

13. The electrophysiology catheter according to claim 11 wherein the magnet member is a permeable magnet material.

14. An improved electrophysiology catheter of the type having a generally hollow electrode member at its distal end, the first electrode member having a generally cylindrical sidewall and a dome shaped distal end, the improvement comprising a magnet member at least partly within the generally hollow electrode, the magnet of sufficient size and strength to align the first electrode inside a patient's body.

15. The electrophysiology catheter according to claim 14 wherein the magnet member is substantially entirely within the hollow electrode member.

16. The electrophysiology catheter according to claim 15 wherein the first electrode has plurality of openings in its distal end, and wherein the magnet has a passage therethrough for conducting fluid from the catheter to the distal end of the first electrode where it can exit the first electrode through the plurality of openings in the distal end.

17. The electrophysiology catheter according to claim 15 wherein the magnet member is a permanent magnet.

18. The electrophysiology catheter according to claim 15 wherein the magnet member is a permeable magnet material.

19. An improved electrophysiology catheter of the type having a generally hollow electrode member at its distal end, the first electrode member having a generally cylindrical sidewall and a dome shaped distal end, the improvement comprising a magnet member at least partly within the generally hollow electrode, the magnet of sufficient size and strength to align the first electrode inside a patient's body with an externally applied magnetic field of at least about 0.1T.

20. The electrophysiology catheter according to claim 19 wherein the first electrode has a plurality of openings in its distal end, and wherein the magnet has a passage therethrough for conducting fluid from the catheter to the distal end of the first electrode where it can exit the first electrode through the plurality of openings in the distal end.

21. The electrophysiology catheter according to claim 19 wherein the magnet member is substantially entirely within the hollow electrode member.

22. The electrophysiology catheter according to claim 21 wherein the magnet member is a permanent magnet.

23. The electrophysiology catheter according to claim 21 wherein the magnet member is a permeable magnet material.

24. A method of navigating an electrophysiology catheter of the type having a generally hollow electrode member at its distal end, the method comprising providing a magnet member at least partly within the hollow electrode member, and applying a magnetic field from a source magnet outside the body to the magnet member inside the hollow electrode member to orient the distal end of the electrophysiology catheter in a desired direction.

25. The method according to claim 24 wherein the magnet member is substantially entirely within the hollow electrode member.

26. The method according to claim 24 wherein the generally hollow electrode has a plurality of openings in its distal end, and wherein the magnet member has a passage therethrough for conducting fluid from the catheter to the distal end of the first electrode where it can exit the first electrode through the plurality of openings in the distal end, and further comprising the step of ejecting coolant through the openings in the electrode.

27. An electrophysiology catheter having proximal end and a distal end, at least one electrode adjacent the distal end, a lead wire extending proximally from the at least one electrode, a magnetically responsive element in the distal end portion of the catheter, the catheter having at least two sections of different flexibility, each section

being more flexible than the next most proximal section so that the flexibility of the catheter increases from the proximal end to the distal end.

28. The electrophysiology catheter according to claim 1 further comprising a temperature sensor adjacent the distal end of the catheter for sensing the temperature at the distal end of the catheter.

29. The electrophysiology catheter according to claim 28 wherein the temperature sensor is mounted on an electrode and sense the temperature of the electrode.

30. The electrophysiology catheter according to claim 27 further comprising a sleeve defining an annular space opening adjacent the distal end of the catheter for delivering irrigating fluid to the distal end of the catheter.

31. (cancelled)

32. The electrophysiology catheter according to claim 27 further comprising at least one localization coil adjacent the distal end of the catheter, and two lead wires extending proximally from the coil.

33. The electrophysiology catheter according to claim 27 wherein the at least one electrode includes a hollow end electrode on the distal end of the catheter, having a plurality of openings therein, and wherein the magnetically responsive element is located at least partially in end electrode and has at least one passage therein for the passage of irrigating fluid to allow irrigating fluid to be delivered from the openings in the end electrode.

34. The electrophysiology catheter according to claim 33 wherein the at least one passage in the magnetic element comprises a generally axially extending passage in the magnetically responsive element.

35. (cancelled)